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**PATENT**  
Attorney Docket No. 214462  
Client Reference No. 188863.01

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

ZHANG, et al.

Group Art Unit: 2681

Application No. 10/051,449

Examiner: J.K. Contee

Filed: January 18, 2002

For: FRAMEWORK AND METHOD FOR QoS-AWARE RESOURCE  
DISCOVERY IN MOBILE AD HOC NETWORKS

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Pursuant to 37 CFR 1.97 and 1.98, the references listed on the enclosed Form PTO-1449 and/or Substitute Form PTO-1449 ("Form 1449") are submitted for consideration by the Examiner in the examination of the above-identified patent application.

The full consideration of the references in their entirety by the Examiner is respectfully requested and encouraged. Also, it is respectfully requested that the references be entered into the record of the present application and that the Examiner place his or her initials in the appropriate area on the enclosed Form 1449, thereby indicating the Examiner's consideration of each of the references.

The submission of the references listed on the Form 1449 is for the purpose of providing a complete record and is not a concession that the references listed thereon are prior art to the invention claimed in the patent application. The right is expressly reserved to establish an invention date earlier than the above-identified filing date in order to remove any reference submitted herewith as prior art should it be deemed appropriate to do so.

Further, the submission of the references is not to be taken as a concession that any reference represents art that is relevant or analogous to the claimed invention. Accordingly, the right to argue that any reference is not properly within the scope of prior art relevant to an examination of the claims in the above-identified application is also expressly reserved.  
The Information Disclosure Statement is being filed:

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- ☐ **within** any one of the following time periods: (a) within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d); (b) within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 of an international application; (c) before the mailing date of a first Office Action on the merits; or (d) before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.
- ☒ **after** (a), (b), (c) or (d) above, but before the mailing date of a final action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and includes *one* of:
- ☐ the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below).
- or*
- ☒ the fee of \$180 set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a final action under 37 CFR 1.113 or a Notice of Allowance under 37 CFR 1.311, or an action that otherwise closes prosecution in the application, and on or before payment of the issue fee, and includes the Statement under 37 CFR 1.97(e) (see "Statement under 37 CFR 1.97(e)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).
- ☐ **after** the mailing date of a Notice of Allowance under 37 CFR 1.311, and on or before payment of the issue fee, and **within** thirty days of receiving each item of information contained in the Information Disclosure Statement, and includes the Statement under 37 CFR 1.704(d) (see "Statement under 37 CFR 1.704(d)" below), and the fee of \$180 as set forth in 37 CFR 1.17(p) (see "Fees" below).

NOTE: This is for original applications except applications for a design patent, filed on or after May 29, 2000, wherein a paper containing only an Information Disclosure Statement in compliance with 37 CFR 1.97 and 1.98 is being filed.

### Copies of the References

- ☒ Copies of all of the references listed on the enclosed Form 1449 are enclosed herewith.
- ☐ This patent application was filed after June 30, 2003. Accordingly, copies of U.S. patents and patent applications that are listed on the accompanying Form 1449 are not enclosed herewith (see Official Gazette Notice of August 5, 2003). Copies of other references identified on the accompanying Form 1449 are enclosed herewith.
- ☐ Attached to each reference not in the English language is a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3). An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of

relevance found by the foreign office is being submitted in lieu of a concise explanation of the relevance pursuant to 37 CFR 1.98(a)(3).

- ☐ A copy of the foreign search report is enclosed herewith.
- ☐ The references listed on the enclosed Form 1449 were previously identified in the parent application(s) of the present application, and copies of the references were furnished at that time. Accordingly, additional copies of the references are not submitted herewith, so as not to burden the file with duplicate copies of references. The Examiner is respectfully requested to carefully review the references in accordance with the requirements set out in the Manual of Patent Examining Procedure. In accordance with 37 CFR 1.98(d), the details of the parent application(s) relied upon for an earlier filing date under 35 USC 120 in which copies of the references were previously furnished are set out below:

U.S. APPLICATIONS		Status ( <i>check one</i> )		
U.S. APPLICATIONS	U.S. FILING DATE	PATENTED	PENDING	ABANDONED
1.				
2.				
3.				

**Statement under 37 CFR 1.97(e)**

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby states that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

**Statement under 37 CFR 1.704(d)**

- ☐ The **undersigned** hereby states that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

In re Appln. of ZHANG et al.  
Application No. 10/051,449

**Fees**

- ☐ No fee is owed by the applicant(s).  
☒ The **IDS Fee of \$180** under 37 CFR 1.17(p) is enclosed herewith.

**Method of Payment of Fees**

- ☐ Attached is a check in the amount of \$ .  
☐ Charge Deposit Account No. 12-1216 in the amount of \$ . (A duplicate copy of this communication is enclosed for that purpose.)

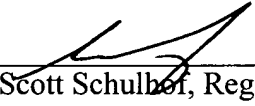
**Authorization to Charge Additional Fees**


- ☒ If any additional fees are owed in connection with this communication, please charge Deposit Account No. 12-1216. (A duplicate copy of this communication is enclosed for that purpose.)

**Instructions as to Overpayment**

- ☒ Credit Account No. 12-1216.  
☐ Refund

Date: June 1, 2005

  
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MAILING/TRANSMISSION CERTIFICATE UNDER 37 CFR 1.8 OR 1.10			
I hereby certify that this document and all accompanying documents are, on the date indicated below, being <input type="checkbox"/> deposited with the U.S. Postal Service using "Express Mail" service in an envelope addressed in the same manner indicated on this document with Express Mail Label Number , <input checked="" type="checkbox"/> deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed in the same manner indicated on this document, or <input type="checkbox"/> facsimile transmitted to the U.S. Patent and Trademark Office at fax number: 703/872-9306.			
Name (Print/Type)	Tamara S. Was		
Signature		Date	June 1, 2005

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OIP INFO  
 STA 45  
 JUN 06 2005  
 PATENT & TRADEMARK OFFICE  
 Sheet 1

*(Use as many sheets as necessary)*

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Application Number	10/051,449
Filing Date	January 18, 2002
First Named Inventor	ZHANG et al.
Group Art Unit	2681
Examiner Name	J.K. Contee
Attorney Docket Number	214462

[illegible][illegible]

OTHER - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No**
	A 1	R. Iannella, "Internet Resource Discovery Issues," <a href="http://archive.dstc.edu.au/RDU/reports/QuestNet95.html">http://archive.dstc.edu.au/RDU/reports/QuestNet95.html</a>		
	A 2	"Decentralized Resource Discovery in Large Peer-based Networks," <a href="http://cubicmetercrystal.com/alpine/discovery.html">http://cubicmetercrystal.com/alpine/discovery.html</a>		
	A 3	Z. Fu and N. Venkatasubramanian, "Combined Path and Server Selection in Dynamic Multimedia Environments," in <i>Proceedings of ACM Multimedia 99</i> , October 1999.		
	A 4	R. van Renesse, "Scalable and Secure Resource Location," in <i>Proceedings of IEEE Hawaii International Conference on System Sciences</i> , January 2000.		
	A 5	S. Czerwinski, B. Zhao, T. Hodes, A. Joseph, and R. Katz, "An Architecture for a Secure Service Discovery Service," in <i>Proceedings of ACM MOBI/COM 99</i> , September 1999.		

Date Considered

- \* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).
- + An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).

Please type a plus sign (+) inside this box →



Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/051,449
				Filing Date	January 18, 2002
				First Named Inventor	ZHANG et al.
				Group Art Unit	2681
				Examiner Name	J.K. Contee
Sheet	2	of	2	Attorney Docket Number	214462

**OTHER - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Doc. No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number (s), publisher, city and/or country where published.	Translation	
			Yes	No**
	A 6	D. Xu, K. Nahrstedt, and D. Wichadakul, "QoS-Aware Discovery of Wide-Area Distributed Services," in <i>Proceedings of IEEE International Symposium on Cluster Computing and the Grid</i> , May 2001.		
	A 7	S. G. Dykes, C. L. Jeffery, and K. A. Robbins, "An Empirical Evaluation of Client-Side Server Selection Algorithms," in <i>Proceedings of IEEE INFOCOM</i> , March 2000.		
	A 8	E. M. Royer and C.-K. Toh, "A Review of Current Routing Protocols for Ad Hoc Mobile Wireless Networks," <i>IEEE Personal Communications</i> , pp. 46-55, April 1999.		
	A 9	C. E. Perkins and E. M. Royer, "Ad Hoc On-Demand Distance Vector Routing," in <i>Proceedings of the 2nd IEEE Workshop on Mobile Computing Systems and Applications</i> , February 1999.		
	A 10	D. B. Johnson and D. A. Maltz, "Dynamic Source Routing in Ad Hoc Wireless Networks," in <i>Mobile Computing</i> , edited by T. Imielinski and H. Korth, Chapter 5, Kluwer Publishing Company, 1996.		
	A 11	S.-J. Lee, "Routing and Multicasting Strategies in Wireless Mobile Ad Hoc Networks," Ph.D. Dissertation, University of California, Los Angeles, 2000.		
	A 12	E. Guttman, C. Perkins, J. Veizades, and M. Day, "Service Location Protocol, Version 2," <i>RFC 2608</i> , June 1999.		
	A 13	I. Stoica, R. Morris, D. Karger, F. Kaashoek, and H. Balakrishnan, "Chord: A Scalable Peer-to-Peer Lookup Service for Internet Applications," in <i>Proceedings of ACM SIGCOMM 01</i> , September 2001.		
	A 14	S. Ratnasamy, P. Francis, M. Handley, R. Karp, S. Shenker, "A Scalable Content-Addressable Network," in <i>Proceedings of ACM SIGCOMM 01</i> , September 2001.		
	A 15	R. Wolski, "Forecasting Network Performance to Support Dynamic Scheduling," in <i>Proceedings of the 6th IEEE International Symposium on High Performance Distributed Computing</i> , 1997.		
	A 16	Z. Fei, S. Bhattacharjee, E. W. Zegura, and M. H. Ammar, "A Novel Server Selection Technique for Improving the Response Time of a Replicated Service," in <i>Proceedings of IEEE INFOCOM 98</i> , April 1998.		
	A 17	K. Konishi, "Report on Large Scale Networking Workshop," March 2001. <a href="http://www.jp.apan.net/meetings/0103-NGI-workshop">http://www.jp.apan.net/meetings/0103-NGI-workshop</a> .		
	A 18	P. Mockapetris, "Domain Names - Concepts and Facilities," <i>RFC 1034</i> , November 1987.		
	A 19	P. Francis, S. Jamin, C. Jin, D. Raz, Y. Shavitt, and L. Zhang, "IDMaps: A Global Internet Host Distance Estimation Service," to appear in <i>IEEE/ACM Transactions on Networking</i> , October 2001.		
	A 20	A. Ephremides, J. E. Wieselthier, and D. J. Baker, "A Design Concept for Reliable Mobile Radio Networks with Frequency Hopping Signaling," in <i>Proceedings of the IEEE</i> , Vol. 75, No.1, pp. 56-73, 1987.		
	A 21	The Official Bluetooth Website: <a href="http://www.bluetooth.com/">http://www.bluetooth.com/</a>		
	A 22	Notes on NAVSTAR GPS Operations. Available at website: <a href="http://tycho.usno.navy.mil/gpsinfo.html">http://tycho.usno.navy.mil/gpsinfo.html</a> .		
Examiner Signature			Date Considered	

\* A concise statement of relevance is being submitted in lieu of a translation. 37 CFR 1.98(a)(3).

+ An English-language equivalent/patent, or an English-language abstract, or an English-language version of the search report or action by a foreign patent office in a counterpart foreign application indicating the degree of relevance found by the foreign office is being submitted in lieu of a concise explanation of relevance under 37 CFR 1.98(a)(3).